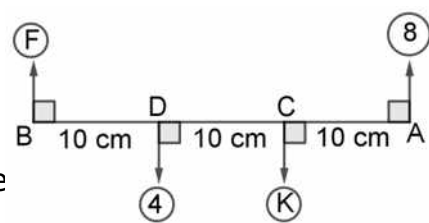


نموذج استرشادي (٣) لامتحان شهادة إتمام الدراسة الثانوية العامة ٢٠٢٥ / ٢٠٢٦ م

المادة : الرياضيات التطبيقية باللغة الإنجليزية (الشعبة العلمية رياضيات) الزمن : ساعتان

First: Multiple choice questions" one mark for each item".

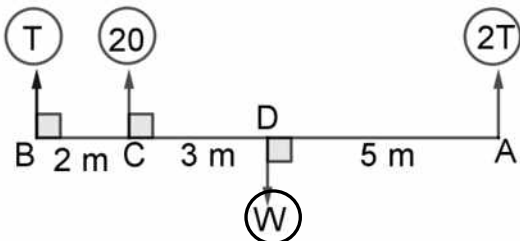
(1)	If the forces $\vec{F}_1 = 5\vec{i} + 4\vec{j}$, $\vec{F}_2 = -2\vec{j}$, $\vec{F}_3 = \left(2\sqrt{2}, \frac{3\pi}{4}\right)$ act at the points $A(3, -1), B(3,4), C(1,0)$ respectively , then the length of perpendicular drawn from the origin point to the line of action of the resultant of these forces = length unit						
(a)	1.2	(b)	1.4	(c)	1.6	(d)	2.6

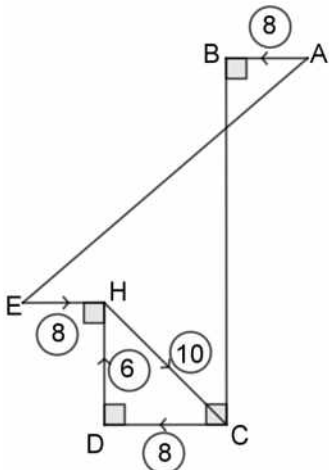
(2)	In the opposite figure: The light rod $\overline{AB}$ is in equilibrium state horizontally and the shown parallel forces measured in Newton , the						
							
(a)	k= 4N, F= 6N	(b)	k= 10N ,F= 6N	(c)	k= 6N ,F= 6N	(d)	k= 12N ,F= 8N

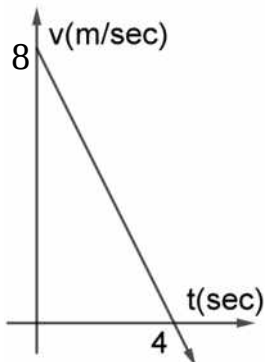
(3)	In the opposite figure: ABCD is square of side length 10 cm , the forces act as shown in the figure, if the couple resulted from the two forces $5\sqrt{2}$, $5\sqrt{2}$ gm .wt. is equivalent to the couple resulted from the two forces F , F , then the magnitude of F = gm .wt.						
(a)	10	(b)	12	(c)	$10\sqrt{2}$	(d)	15

(4)	A body started to move in a straight line , its velocity v(m /sec) is given as a function of time (t)sec by the relation: $v = 3t^2 - 2t$, then the acceleration of motion $a = \dots\dots\dots$ m/sec ² at t = 3 sec.						
(a)	10	(b)	14	(c)	16	(d)	20

(5)	A body of variable mass , its mass $m = (4t + 1)$ kg. moves with constant velocity, it covered 24meter in 3seconds, then the magnitude of the force acted on the body = Newton						
(a)	24	(b)	28	(c)	32	(d)	40

(6)	In the opposite figure: $\overline{AB}$ is uniform rod of length 10 meter and its weight (W) Kg. wt. is hanged up from its ends by two vertically light strings. If a force of magnitude 20 kg wt. acts vertically upward at C to make the rod in equilibrium state horizontally and the tension at A is twice the tension at B , then the weight of the rod = Kg.wt.						
	(a)	36	(b)	56	(c)	65	(d)

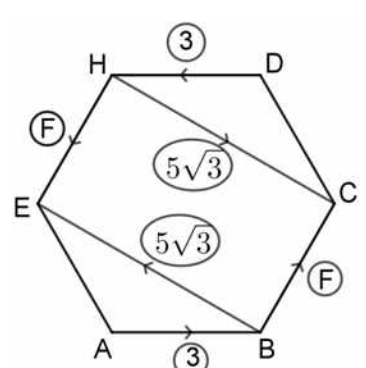
(7)	In the opposite figure: $AB= HE= 2\text{ cm}$, $DH= 3\text{ cm}$, $BC= 9\text{ cm}$, $AE= 10\text{ cm}$, the forces act as shown in the figure (measured in Newton) , then the magnitude of the moment of the resultant couple = Newton .cm						
	(a)	64	(b)	72	(c)	48	(d)

(8)	If the opposite figure represents (velocity – time) curve of a particle started its motion from a fixed point in a straight line , then the position of the particle after 3 second from starting its motion equals meter						
(a)	10	(b)	15	(c)	18	(d)	20

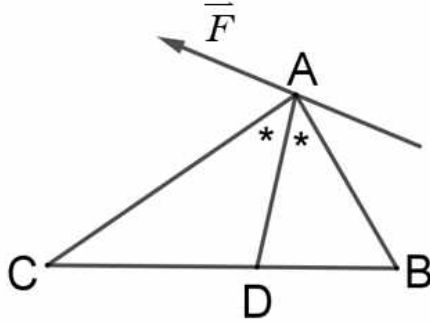
(9)	A body of weight m kg placed on a pressure balance fixed on the ground of a lift, If the reading of the balance was 90 kg.wt. when the lift ascends with uniform acceleration $2a$ m/sec ² and the reading was 60 kg.wt. when the lift descends with uniform acceleration a m/sec ² , then			
(a)	$m = 70$ kg , $a = 1.4$ m/sec ²	(b)	$m = 60$ kg , $a = 2.45$ m/sec ²	
(c)	$m = 63$ kg , $a = 2.1$ m/sec ²	(d)	$m = 80$ kg , $a = 0.6125$ m/sec ²	

(10)	A variable force F (measured by dyne) acts on a body where F is given as a function of the displacement (s) cm by the relation : $F = (1 + \tan^2 s) e^{\tan s}$, then the work done by the force in the interval from $s = 0$ to $s = \frac{\pi}{4}$ equals..... erg			
(a)	$2e$	(b)	$e+1$	(c) $2e-1$ (d) $e-1$

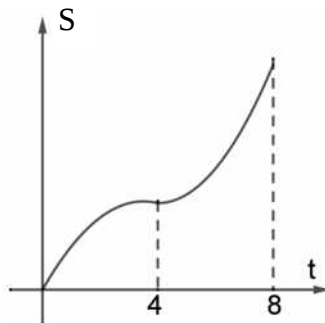
Second: Multiple choice questions" two marks for each item" .

(11)	In the opposite figure: ABCDHE is regular hexagon , the forces act as shown in the figure (measured in Newton) ,if the forces are In equilibrium state , then $F = \dots\dots\dots$ newton 			
(a)	1	(b)	2	(c) 3 (d) 4

(12)	The force $\vec{F} = 5\vec{i} + 4\vec{j}$ acted on the body to move it from the initial position A to the position B in 2 seconds , and its position vector is given by the relation $\vec{r} = (t^2 - 3)\vec{i} + (3t + 1)\vec{j}$, (where the magnitude of $\vec{F}$ measured newton and the magnitude of $\vec{r}$ in meter , t in second), then the change of the potential energy of the body = Joule .			
(a)	-33	(b)	-32	(c) -44 (d) -48

(13)	In the opposite figure: If $\vec{F}$ acts in the plane of $\triangle ABC$, $\overrightarrow{AD}$ bisects $\angle BAC$, AB = 6 cm, AC = 9 cm, $M_B = 8$ Newton.cm, and $M_D = 10$ Newton.cm, then $M_C = \dots\dots$ Newton.cm							
	(a)	10	(b)	11	(c)	12	(d)	13

(14)	If the forces $\vec{F}_1 = 3\vec{i} - 2\vec{j}$, $\vec{F}_2 = \vec{i} + 5\vec{j}$, $\vec{F}_3 = -2\vec{i} + \vec{j}$ act at the points A (2, 4), B (3, 2), C (2, 0) respectively, then the equation of the line of action of the resultant of these forces is						
(a)	4x - 2y + 1 = 0	(b)	4x + 2y = 1	(c)	2x - 4y = 1	(d)	X - 2y = 1

(15)	If the opposite figure represents the (displacement – time) curve of a particle moves in a straight line within the time interval $]0, 8[$, then the motion is	
(a)	always acceleration	
(b)	always deceleration	
(c)	acceleration in $]0, 4[$ and deceleration in $]4, 8[$	
(d)	acceleration in $]4, 8[$ and deceleration in $]0, 4[$	

(16)	If a constant force of magnitude 14 kg.wt. acts on a body of mass m kg for $\frac{1}{4}$ second to change its velocity from 3 m/sec to 36 km/hr in the same direction of the force , then the mass of the body m = kg.						
(a)	3.5	(b)	4.7	(c)	4.9	(d)	5.2

A diagram showing a ladder AB leaning against a vertical wall and resting on a horizontal floor. A weight of 20 kg is suspended from the ladder. The angle between the ladder and the floor is 45° .

- | | | | | | | | |
|-----|---|-----|-----|-----|-----|-----|-----|
| (a) | 2 | (b) | 2.4 | (c) | 2.6 | (d) | 2.8 |
|-----|---|-----|-----|-----|-----|-----|-----|

A force F Newton acted upon a body of mass (2π) kg to move it in a straight line in the direction of the force, where $F = \sqrt{9 - (s - 3)^2}$, $0 \leq s \leq 6$, where s is the displacement in meter. If its kinetic energy at the end of the displacement = (8.5π) joule, then its initial velocity = m/sec

- | | | | | | | | |
|-----|---|-----|-----|-----|---|-----|-----|
| (a) | 2 | (b) | 2.4 | (c) | 3 | (d) | 3.8 |
|-----|---|-----|-----|-----|---|-----|-----|

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موقع الدكتور محمد رزق التعليمي

امسح الباركود بالموبايل لتثبيت
التطبيق وتحميل كل الملازم مجاناً وبسرعة



حمل التطبيق الآن



كورسات ونتائج امتحانات



ملازم ثانوي



ملازم اعدادي



ملازم ابتدائي



موقع الدكتور محمد رزق
Dr. Mo. RAZK



D.M.RAZK

موقع الدكتور محمد رزق معلم الكيمياء التعليمي